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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,388	02/06/2004	Shigenobu Nakamura	118604	6780
25944	7590	05/02/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			PRESTON, ERIK D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/772,388	Applicant(s) NAKAMURA ET AL.	
	Examiner Erik D. Preston	Art Unit 2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,10,11 and 15 is/are rejected.
- 7) ☒ Claim(s) 3-5,7-9 and 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>translation of JP 08-085402</u> .      |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,6,10 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US 4232238 previously cited) in view of Rose, Sr. (US 2001/0033116).

With respect to claim 1, Saito teaches an AC generator for a vehicle comprising: A rotor (Fig. 2, #2); a stator (Fig. 2, #1) opposed to the rotor and having an output lead (as seen in Fig. 2); a rectifying device (Fig. 3, #5a) connecting to the output lead of the stator; a regulator (Fig. 1, #6) that controls output voltage; a common connector (Fig. 3, #15) including internal terminals that connect the regulator with an internal circuit of at least one of the rectifying device and the rotor; and an individual connector (Fig 3, #7a & 7b) connected to the common connector, the individual connector including external terminals that transmit electric signals to an external circuit, wherein the common conductor and the individual conductor further include intermediate terminals contacting with each other and engaging portions engaging with each other, the engaging portions being formed of projections and recesses (as seen in Fig. 2, the individual connector is a projection, and the common connector contains recesses through which the individual connector protrudes), but it does not teach electric signals being received by the external terminals from the external circuit. However, Rose teaches a dynamoelectric

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machine that functions as a starter/generator by both charging and being powered by a common battery (Paragraph 26). It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the automotive alternator of Saito in view of the starter-generator configuration as taught by Rose, because it provides a means for a generator to also function as the starter motor of an internal combustion engine (Rose, Paragraphs 3-5). While the dynamoelectric machine of Saito is operating as a starter motor, current will flow from the battery (Fig. 1, #10) through the external terminal (Fig. 1, #7a) and into the internal circuit. While the dynamoelectric machine of Saito is operating as an alternator, current will flow from the internal circuit through the external terminal (Fig. 1, #7a), and into the battery (Fig. 1, #10).

With respect to claim 2, Saito in view of Rose teaches the AC generator of claim 1, and Saito teaches that the common connector is connectable with each of a plurality of individual connectors having different shapes (as seen in Fig. 3).

With respect to claim 6, Saito in view of Rose teaches the AC generator of claim 1, and Saito teaches that each of the intermediate terminals of the common connector and each of the intermediate terminals of the individual connector are opposed to and paired with each other.

With respect to claim 10, Saito in view of Rose teaches the AC generator of claim 1, and Saito teaches that the number of intermediate terminals of the common connector is equal to or greater than that of the individual connector.

With respect to claim 15, Saito in view of Rose teaches the AC generator of claim 1, and Saito teaches that the external terminals of the individual connector connect the

external circuit with the regulator (as seen in Fig. 1, both the battery and the ground are separate from the internal circuit).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US 4232238 previously cited) in view Rose, Sr. (US 2001/0033116) further in view of Shibata et al. (JP 08-085402 previously cited). Saito teaches the AC generator of claim 1, but it does not teach that the regulator is mounted on the individual connector. However, Shibata teaches placing IC elements on a connector (Fig. 7, #9). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the regulator of Saito in view of the connector as taught by Shibata because it allows for better cooling of the IC elements (Shibata, Abstract).

***Allowable Subject Matter***

Claims 3-5,7-9 & 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 3, while prior art does teach claim 2, it does not teach a plurality of individual connectors having different shapes.

With respect to claim 4, while prior art does teach claim 1, it does not teach first and second engaging portions in the radial and axial directions respectively.

With respect to claim 5, while prior art does teach claim 1, it does not teach the common connector having projections.

With respect to claim 7, while prior art does teach claim 6, it does not teach one intermediate terminal being straight, and its opposite intermediate terminal being bent.

With respect to claims 8 & 9, while prior art does teach claim 1, it does not teach removable intermediate terminals.

With respect to claim 12, while prior art does teach the claim 1, it does not teach first and second engaging portions parallel and perpendicular to the intermediate terminals.

Claims 13 & 14 are dependent upon above claims.

### ***Response to Arguments***

Applicant's arguments, see Page 8, 2<sup>nd</sup> Paragraph of the remarks, filed 3/13/2006, with respect to the rejection(s) of claim(s) 1 under Saito have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Saito in view of Rose.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



04/24/2006



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